GEOGRAPHIC SCHOOL BULLETINS

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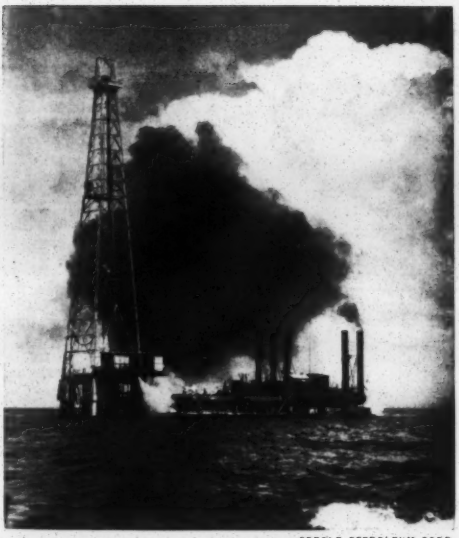
MODERN CARACAS, with gleaming buildings and sweeping expressways, symbolizes Venezuela's rapid-fire progress. Fifty years ago, this capital was a small farming town

49 HAMILTON WRIGHT

Even oil and iron fail to tell all of Venezuela's story. Natural gas, oil's byproduct, waits to be tapped. Oilmen, working fields near Lake Maracaibo and in the plains north of the Orinoco River, have simply burned off millions of cubic feet of it because they have no way of capturing it. Coal underlies much the same land that sprouts oil rigs. The eastern state of Anzoategui can offer about 150,000 tons of coal a year for a century or so. The coastal state of Sucre can provide about a million tons of sulphur. Venezuelan miners can swing picks at deposits of asbestos, phosphate, nickel, lead, copper, bauxite, and other minerals. And adventurous prospectors can hack their way into untouched wilderness bordering Brazil with considerable hope of getting rich quick by striking gold, diamonds, or other valuable minerals.



CREOLE PETROLEUM CORP.

Much of the wealth that pours into Venezuela is plowed back into the projects that earned it: to pay for the dredging of the channel into Lake Maracaibo, to build a railroad from Cerro Bolívar to the Orinoco River and to set up a dockside loading system that fills the holds of vessels with iron ore almost before sailors have a chance to step ashore. Oil and iron money also finances sleek new highways, standardized railroads, irrigation of new land, a steel plant, a hydroelectric development, and a petrochemical institute.

VENEZUELAN INFORMATION SERVICE

Prosperity builds new schools, new hospitals. It has practically wiped out malaria, except in the jungles. It has raised the birth rate, lowered the death rate, and boosted immigration. Venezuela's population (more than 6,000,000) jumped a million between 1950 and 1955—fastest growth of any nation.

There are enough Bolí-

FROM PLAZA BOLÍVAR, a quiet pocket of old Caracas, the Great Liberator watches his city and country flourish

UMI

CREOLE PETROLEUM CORP.

Venezuela

Oil derricks rise above Maracaibo's waters where Indian homes on stilts inspired the Spanish name "Little Venice"

NOT long after Columbus touched the mountain-walled coast of Venezuela, ship captains began sailing through the narrow gut into Lake Maracaibo, above, to calk their vessels. This deep arm of the Caribbean, separated from salt water only by shoals and islands, shimmered with oil slicks on its surface. Oily tar oozed from rocks along the shore—perfect to mix with oakum, the filler that sailors use to plug leaks.

Now more than 2,000 derricks stipple Lake Maracaibo's calm waters. Wells probe far below lake bottom to tap liquid treasure. Some one-tenth of all the world's oil production gushes from those derricks.

In an oil-thirsty world, the Republic of Venezuela leads all nations as an oil exporter, ranks second only to the United States in the volume of oil tapped—more than 2,000,000 barrels every day. Yet if its oil wells ran dry, this South American nation, a little bigger than Texas and Oklahoma combined, would still be rich. Far to the east of Lake Maracaibo, in remote savannah country south of the Orinoco River, a bleak mountain rises 2,018 feet above grassy foothills. The whole top layer of this mountain, a crust four miles long, one mile wide, and 230-550 feet deep, consists of high grade iron ore—an estimated half billion tons of it, waiting to be scraped off and shipped to the world's ever-hungry steel mills. This is Cerro Bolívar, Venezuela's "iron mountain," already producing the muscle of industry.

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Living In A Boom Country

VENEZUELAN INFORMATION SERVICE

WHILE new money floods into Venezuela and new enterprises —designed to earn still more—sprout like mushrooms, how has life changed for more than 6,000,000 Venezuelans?

Possibly the greatest difference is in mining and oil drilling towns where the boom has brought jobs, filled pockets, built houses like the one with the modern kitchen at right. Most iron ore workers like this one "never had it so good."

In Caracas, a cultural center for nearly 400 years, the streamlined skyscrapers and expressways are outward signs of new cultural strides. The Central University in Caracas, 20 years younger than Yale, now boasts new buildings and facilities clustered on a 370-acre campus. There, next month, will be held the first Pan American book festival with literature from both North and South America. Venezuelan art, architecture, and music thrive in the capital. Along with immigrants from Spain, Portugal, and neighboring Colombia, are thousands of Italians, many British, Germans, French, and Dutch. All add new flavor to the cultural heritage of Caracas.

Literacy throughout the republic's 20 states and two territories has shot upward. The government plans to build 546 public schools by 1961, has already built more than 250. But in the vast hinterland progress comes more slowly. Indians, as primitive as in days of the conquistadores, live in grass huts (left).

RUTH ROBERTSON

As government-trained farmers, both immigrant and Venezuelan, branch out to work newly irrigated land, Indian villages will be caught up by civilization. Even eerie fastnesses of the Gran Sabana will echo to the ring of prospectors' picks.

To see how boom times affect a strip of desert in the Near East turn to page number 56.—

UMI

VENEZUELAN INFORMATION SERVICE

DOCKSIDE CONVEYOR speeds Venezuelan iron ore to world markets. Production touches 7,000,000 tons a year

vars (each worth about $.30) left over to make Caracas, Venezuela's capital, into a show window for the seam-bursting nation. This wonder city changes its face so fast that its citizens often get lost when they return to it after a visit abroad.

Tourists (Venezuela welcomes them) arriving by ship at La Guaira may unload their cars and sweep into Caracas on the new four-lane highway that soars over the coastal mountains to Caracas, 11 miles away and 3,000 feet up. Costing almost $7,000,000 a mile, this superroad, the *autopista*, leaps misty gorges on magnificent bridges, tunnels under unassailable peaks, banks around gentle turns and finally rolls into town, aiming straight for spanking new Bolívar Center, (cover) an architectural unit of 24 buildings based around twin 30-story skyscrapers with office space for 7,000 people, underground parking facilities for 1,600 cars.

This monument to modernity looms only a few blocks from Bolívar Plaza, a placid, shaded park memorial to Simón Bolívar, liberator of five South American republics and a native of colonial Caracas. On the outskirts of the city, clinging to surrounding hills, are suburbs of new, rambling homes, low rent apartments, and high price hotels, many gleaming with brilliant color.

Put a triangle on its tip to get an idea of Venezuela's shape. Caracas perches close to the long northern coast, high enough to enjoy a springtime climate. Westward the horizon tumbles into an arm of the Andes, where peaks soar above 16,000 feet. To the south, cattle graze on rolling llanos (plains) that shelve to the mighty Orinoco River. South of the river lie the highlands, the fabulous Gran Sabana, an almost unknown "lost world" where mesa-like peaks leap from jungle valleys. It was here that an American flyer-prospector, Jimmy Angel, discovered the world's highest waterfall. With a drop of 3,212 feet, Angel Falls is 15 times Niagara's height.

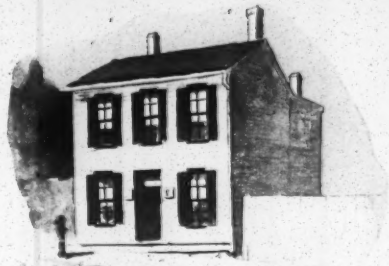
Venezuela's southern tip almost touches the Equator. In this area the country produces yet another wonder—a natural feature that breaks all geographic rules. The upper waters of the Orinoco divide. One branch flows north as the Orinoco; the other swings southwest as the Casiquiare and runs into the Amazon River system. Thus two separate river systems are linked together. And a great slab of northeastern South America, including much of Venezuela, British Guiana, Surinam, French Guiana, and a slice of Brazil, is technically an island.—E.P.

Samuel cut the boyhood capers he immortalized in Tom Sawyer. Naturally, the white two-story frame house at 208 Hill Street is Hannibal's best known address—and one of the world's most beloved. Visitors may strain to rehear in fancy the shrill calls the house once knew. . . . "Forty times I've said if you didn't let that jam alone I'd skin you" . . . or the signals catcalled into long ago nights when Sam summoned Tom Blankenship, the real Huckleberry Finn, to a rendezvous.

The replica white fence, shoulder-high on a growing boy, reminds of how Tom Sawyer unloaded his whitewash chore on his chums. "Aunt Polly's awful particular about this fence," he hoodwinked them. "I reckon there ain't one boy in a thousand, maybe two thousand, that can do it the way it's got to be done," he challenged.

Remember the little frame law office mentioned in *Innocents Abroad*, where Judge Clemens presided as Justice of the Peace in the frontier community? Hannibal citizens have moved it because of repeated flood damage. A metal marker tells how Tom and Huck, sleeping on the floor one night, discovered a dead man. They went out the window taking "sash and all."

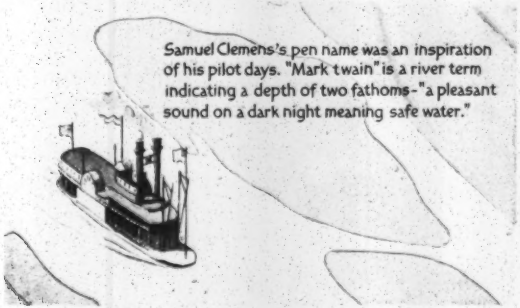
Other reminders abound of the writer whom Rudyard Kipling called "the biggest man you have on your side of the water." His name gleams in lights on a theatre marquee; there are Mark Twain confectioners and other such enterprises. Becky Thatcher is memorialized in a book shop sign, Injun Joe in a motel's name. But for most visitors such reminders aren't needed. The river itself seems eternally to murmur: Mark Twain.



Mark Twain Boyhood Home

For Hannibal residents, life moves with characteristic Middle Western briskness. Rich yields of wheat, corn, soybeans and oats on surrounding farms stimulate trade, boost local industries. Prosperity reflects from more than $18 million in the bank.

But the heart of Hannibal beats in the high bronze statue of Mark Twain that overlooks his boyhood river. The simple inscription says: "His religion was humanity and a whole world mourned for him when he died."—S.H.

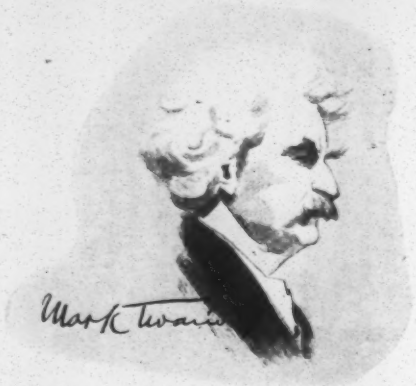


Samuel Clemens's pen name was an inspiration of his pilot days. "Mark twain" is a river term indicating a depth of two fathoms-"a pleasant sound on a dark night meaning safe water."

DRAWINGS BY NATIONAL GEOGRAPHIC ARTIST IRVIN E. ALLEMAN

"Aunt Polly's awful particular about this fence . . ." Tom hoodwinks a chum

NATIONAL GEOGRAPHIC PHOTOGRAPHER WILLARD R. CULVER



HANNIBAL, MISSOURI

Tom Sawyer and Huck Finn

Every year, thousands revisit their childhood

by making pilgrimage to the Mississippi River town

where Mark Twain immortalized the dreams and deeds of youth

FEW towns can boast two such boys as Tom Sawyer and Huckleberry Finn. That's because only Hannibal, Missouri, had Mark Twain, a warm-hearted genius who loved and understood boyhood. A wide world of readers has shared the deeds and dreams of the author's irrepressible, mischief-minded young heroes.

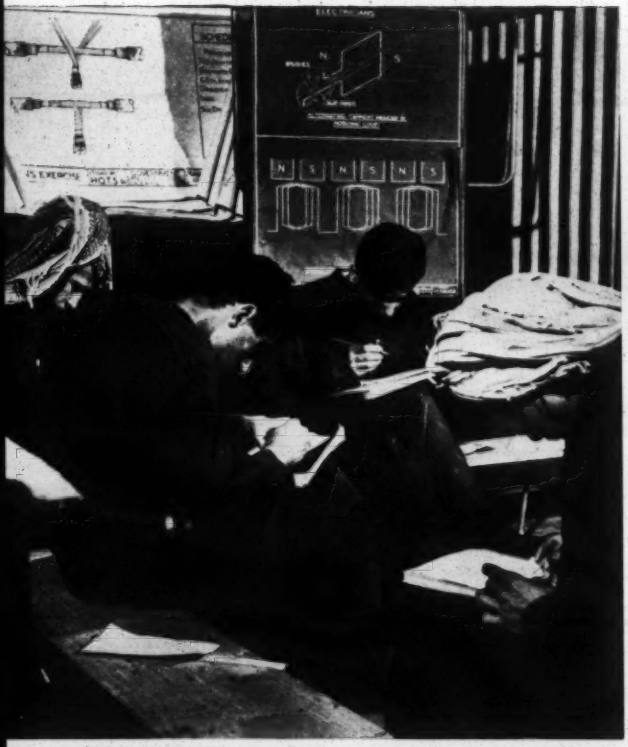
If Hannibal was fortunate to have Mark Twain, he himself could have had few better places for childhood. Best of all was the moody, near-mile-wide Mississippi—a river for rafts, for catfish dangling on homemade hooks, for fun even in flood time when water lapped the valley town. The river was the doorway to the world, bringing sudden black smoke from wheel-churning boats and excited shouts from shore of "Steamboat a-comin'!" enough to draw everyone out to hail the visitor.

And near the Illinois shore crouched shaggy Jackson's Island, a lair that real Indians and pirates might like; so no wonder did Tom, a stalwart of the Spanish Main, go there often with Huck the Red Handed, and Joe Harper, a terror on any sea. Also for boyhood's eyes were entrancing heights and depths—225-foot-high Lovers' Leap edging Hannibal, and two miles southward a cave with creepy miles of underground corridors. There Tom and Huck found Injun Joe's buried treasure. There, too, Sam Clemens (who wrote as Mark Twain) and Laura Hawkins, who was the real life Becky Thatcher, once were lost in the darkness.

Tom and Becky

Flowing river, cave and island, wandering summer clouds, and the haunting sighs of boat whistles—the Hannibal of Samuel Clemens's time a century past—is the Hannibal that millions muse on. Last year 127,000 persons went there to let their fancies find the "white town drowsing in the sunshine of a summer's morning," as Clemens remembered the place seventy years ago.

His imprint glows on the city of 21,000 residents, swelled some twenty times since Judge Clemens and family arrived there over a century ago and son



GULF OIL CORPORATION

DESERT NOMADS are trained for oil field jobs in schools offering trade courses

Free instruction carries with it clothing, lunches, and free medical care for all. Even animals share. A Western resident once watched a boy leading a cow from a distant part of town. "Where did you come from?" the lad was asked. "From the cow hospital," he replied. Hospitals for humans with private rooms, tiled wards, and patios suggest interventions by Western science in a land long screened by desert and distance.

Sports are popular. Football is ofttimes battled out in 115-degree heat. Cries of excitement ring out as junior-grade sheiks exercise falcons from limousines, or water ski in the gulf behind varnished speedboats.

Older residents of the capital—also called Kuwait—still reflect, "We scarcely know the place." Fluorescent lights shimmer below pale desert stars. On what once was the edge of desert, modern villas and bungalows spread like an American suburb.

Yet, Kuwait, like an old lady with treasured accessories, clings to its brimful bazaars. These string weblike along narrow lanes, beset with money changers, cloth merchants, and gold and silver smiths.

The traveler who comes suddenly upon the western edge of Kuwait's bazaar is immediately part of the noisy crowd. Women, veiled and swathed in black *abas*, sit on long cement slabs, their wares neatly piled before them on pieces of cloth to keep them clean. They sell dresses, head cloths, pants, baby clothes, hinges, screws, beads, mirrors, crocheted caps, tools, spark plugs, candy, locks, keys, phonographs and records—and even an occasional carom board.

Beyond all this lie the restless ships, gulping deep fills of oil. To the sheikdom one of the most help-

GEORGE RODGER, MAGNUM

KUWAIT: *A bucket of sand on a barrel of oil*

CHANGE usually comes slowly to Near East lands, creeping like a desert caravan. But the Sheikdom of Kuwait welcomed its 200th anniversary this year amidst a boom still so new and wonderful it might have been rubbed from Aladdin's lamp. The boom is anchored in oil, billions of barrels of it found beneath Kuwait's barren sands in the past decade. Besides astounding wealth it brought many changes to a Moslem land long accustomed to modest means and placid Arabic traditions.

The wealth, the altered ways reached one of earth's obscure localities. A British-protected sheikdom, Kuwait (pronounced Koo-WITE) blisters in blazing sun on the northwest rim of the Persian Gulf. Its 6,000 square miles would wobble inside New Jersey's boundaries; it has Iran, Iraq, Saudi Arabia, and a Neutral Territory for neighbors. Mysterious Mecca, storied Medina, and bustling Baghdad raise minarets not far off by air-age standards.

The sheikdom awoke suddenly to affluence—and a high role in world economics. After a fruitless try in 1936, oil was struck within two years and a rewarding succession of wells followed. The disruption of World War II stopped production in 1942. But on July 30, 1946, the first Kuwaiti crude oil spewed into a tanker. The boom was on.

To Sheik Abdullah as Salim as Subah, whose forebears established the state in 1756, comes by dynastic law half the profits of the Kuwait Oil Company, a joint British-American enterprise. His share hovers on $200 million a year—with no income tax! Middle-aged, he finds himself one of the world's richest men, but without desire to amass palaces, yachts, or glittering trappings.

Instead, he has channeled the "liquid gold" into schools, hospitals, and public works programs. Education thus has reached thousands of boys—and even girls, an extraordinary practice in Near East countries.

PAUL EDWARD CASE

TRADERS in Arabian robes and headdress stride a new street in booming Kuwait. Bicycles, Western clothes, and shoes reflect the old sheikdom's new merging of cultures

ful changes wrought by the oil is more water. For centuries, water was imported from the Shatt al Arab, a river 80 miles away. Now, American-made distillation plants purify millions of gallons from the sea.

Stern in his public-improvement program, the Sheik placed some early safeguards on administration. The ministers were made independently rich to stand above temptation. Said one: "We all have our own fortunes, which have been made ample. That leaves us free to do what we wish most—to build our own monuments in solid public works benefiting our people."

Asphalted double roadways replace time-scarred dust tracks. On the streets Arabs brush long robes against the business suits of Westerners. Guttural Arabic meets accents of Texans, Oklahomans, oil men from everywhere. Behind business office doors, executives ask: "What's the latest on the Suez Canal controversy?" Nationalized by Egypt, the canal links Kuwait oil with its market.

Before the oil boom, some 170,000 inhabitants worked at time-accepted roles of fishing, pearling, shipbuilding, and seafaring. The capital lay as a junction of caravan routes and the home port of sea-going dhows.

Favorable geographical position and relaxed customs regulations gave Kuwait a comfortable traffic in goods moving between Europe, Asia, and Africa. Life was fairly ample. And then the oil gushed, and change rushed in.—S.H.

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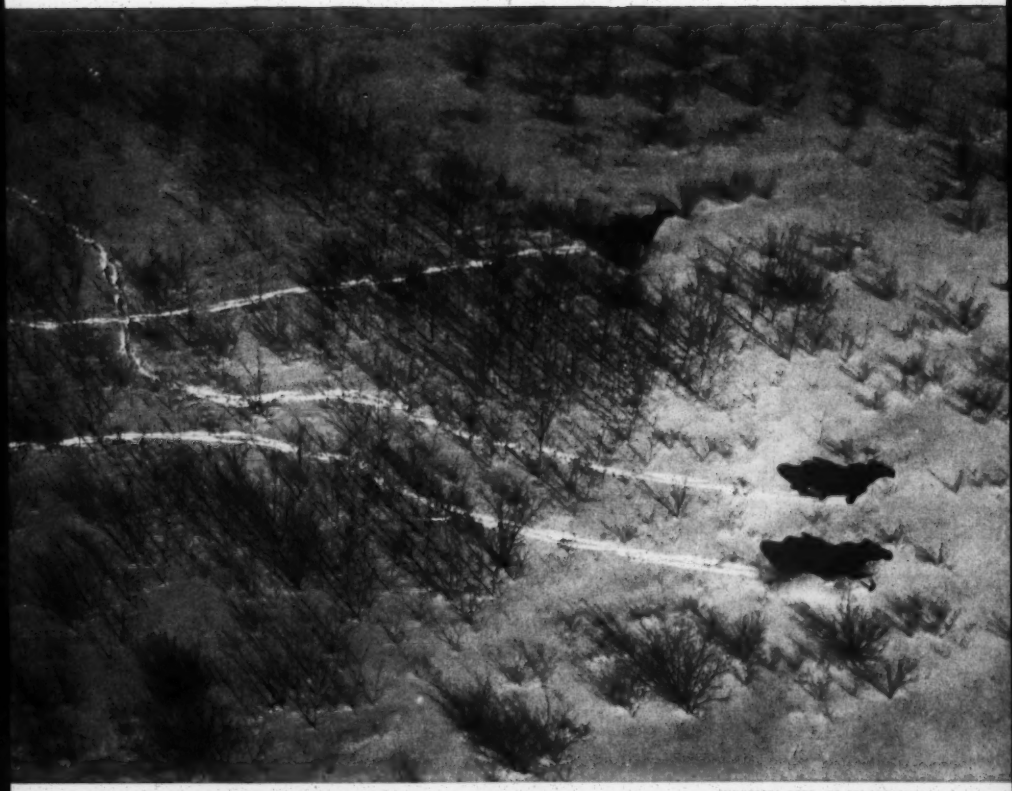

MINNESOTA DEPT. OF CONSERVATION

THE MOODY MOOSE . . .

FOR most of the year, the North American bull moose is a timid soul, but during and after the fall mating season he acts like the lord of all creation.

Recklessly, he paces his domain, blood in his eye, clashing his great antlers against rocks, trampling saplings underfoot. When he hears the grunting, blatting call of a cow or another bull challenging his supremacy, Mr. Moose takes off through the scrub like a light tank, crashing into trees, bulldozing through bushes. If he meets a rival bull, he lowers his head in an earth-shaking charge. Generally, the two beasts lock horns and try to outpush each other.

It is at this time of year that hunters take their toll. But strict conservation laws have saved the regal beast from extinction.

After the calf is born it is mother moose who takes over in the terrible temper department. Momism runs rampant as over-protective females charge any real or fancied source of danger to junior. Frank and John Craighead, coauthors of "Wildlife Adventuring in Jackson Hole," (*National Geographic Magazine*, January, 1956) recall a time when Frank came upon a cow moose with twin calves. Without preliminaries, the hornless mother charged. Frank, carrying a pack and wearing fishermen's hip boots, could not escape. He dodged her once, then she caught him as he was trying to scramble up a small spruce. She reared back on her hind legs, a murderous look in her eye, and Frank realized she was about to slash him with sharp forefeet. He did the only thing left to do. Looking

UMI

D. S. RAWSON

From babyhood, moose are as much at home in water as on land

the moose straight in the face, he let out a hair-raising yell: The cow took off.

When moose aren't worried about family matters, they're peaceable monsters ranging 200,000 strong through Alaska and Canada and northern United States. They feed on leaves and juicy twigs, standing on hind hoofs to reach them, or simply bending trees down to a convenient height. They cherish water lilies and will wade far out into swampy north country ponds lipping plants from the surface, ducking their great heads completely under water to get at roots.

In their peaceful periods, which last more than three-fourths of the year, moose display regal dignity and quiet charm. With their outrageously long muzzle, rubbery lips, and clumsy-looking gait, they will never win a beauty prize, but a full-grown Alaskan bull moose slipping through dense bush without cracking a twig is one of the lordly sights of nature. He'll weigh a ton, stand about eight feet tall at his humped shoulders, and proudly brandish a headful of palmated antlers six feet across.

While calves are young and antlers of old bulls only partly grown, moose seek safety by foraging mostly at night. But a full grown bull, flourishing gleaming horns, seems to consider himself big enough and tough enough to tackle anything. Stalking along back roads in northern Maine, he barely deigns to step aside for onrushing cars.

Canadian police rescued one old battler off the coast of Labrador. Bucking through North Atlantic breakers, he was swimming purposefully toward Europe. During Canadian winters moose sometimes prefer trotting along plowed railroad tracks to plunging hip deep through snow. Meeting a locomotive, a husky bull is quite apt to charge it. The result is usually mooseburger—and sometimes a derailed engine.—E.P.